Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-17 (canceled)

Claim 18 (currently amended): An electrotherapy apparatus comprising a sensor for detecting periodically recurring signal peaks, ~~for example the R-R peaks of an electrocardiogram of a person,~~ a processor for deriving from said periodically recurring signal peaks a time delay corresponding to approximately the end of the T-wave, a trigger system or a circuit initiated by an output signal of said processor or embodied within said processor for applying electrical stimulations to one or more active electrodes provided on the said person at a time related to the end of said time delay, the processor being adapted:

a) to make a determination for successive pairs of signal peaks of a value corresponding to the time between said successive pairs of signal peaks and thus to the said person's heart rate,

b) to compare said value with maximum and minimum permissible technical limits permitted by the apparatus and/or

c) to compare said value with maximum and minimum permissible selected limits,

d) to determine whether each said value exceeds a preceding value or a preceding value averaged over a plurality of heart beats by more than a defined amount,

e) to determine whether each said value is less than a preceding value or a preceding value averaged over a plurality of heart beats by more than a defined amount,

f) to trigger said trigger system or circuit only when the comparisons b) and/or c) are favourable and the determinations d) and e) show that the said value does not exceed the preceding value or the preceding average value by more than the defined amount and

is not less than the preceding value or the preceding value by more than the defined amount,

g) to close a measurement window for said sensor once a determination is made that the comparisons b) and/or c) are favourable and that the determinations d) and e) show that the said value does not exceed the preceding value or the preceding average value by more than the defined amount and is not less than the preceding value or the preceding average value by more than the defined amount, said measurement window being closed prior to triggering said trigger system,

h) to calculate in addition to said time delay a maximum stimulation length,

i) to check that the derived value of said time delay is greater than or equal to a delay time equivalent to a trigger delay plus a calculation delay, said trigger delay being the delay between initiation of a trigger signal delivered by said sensor corresponding to the detection of a first signal peak and the time this signal reaches the processor and the calculation delay being the time required by the processor to derive the delay,

j) to check that the derived time delay is less than or equal to said maximum stimulation length and to revise said derived time delay if necessary so that it fulfils the two conditions derived time delay greater than or equal to the trigger delay plus the calculation delay and derived time delay less than or equal to the maximum stimulation length,

k) to calculate a maximum duration equal to the maximum stimulation length minus the time delay,

l) to calculate a duration of said electrical stimulation and a maximum duration value equal to said maximum stimulation length minus said derived time delay and to check whether said calculated duration is less than or equal to said maximum duration and if not to adapt it so that it is less than or equal to said maximum duration,

m) to calculate an open measurement window time equal to said derived time delay, or said adapted delay, if said delay has been adapted, plus said duration or said adapted duration, if said duration has been adapted, plus a safety margin, and

n) to send an output signal to said trigger system during said measurement

window and open said measurement window at the calculated time permitting the recognition of the detection of a further peak of said electrocardiogram by said sensor.

Claim 19 (previously presented): An electrotherapy apparatus in accordance with claim 18, wherein said processor is adapted to repeat the sequence of steps based on the new R-R value.

Claim 20 (previously presented): An electrotherapy apparatus in accordance with claim 19, wherein, if a further signal peak is not detected after opening of said measurement window within an expected time calculated by said processor based on a preceding value or a preceding average value, no trigger signal is transmitted and transmission of a trigger signal and thus stimulation is inhibited until further signal peaks are detected within expected limits.

Claim 21 (previously presented): An electrotherapy apparatus in accordance with claim 18, wherein, instead of using a value of the preceding time between signal peaks as said value, an average is formed from a plurality of past values.

Claim 22 (previously presented): An electrotherapy apparatus in accordance with claim 21, wherein the processor is adapted to include in said plurality of past values only those values which lie within a range less than the preceding measured value plus a predefined positive deviation and more than a value corresponding to the preceding measured value less a predefined deviation.

Claim 23 (previously presented): An electrotherapy apparatus in accordance with claim 18, wherein the apparatus has a plurality of channels for applying electrical stimulations to one or more active electrodes provided on the said person and in that for each said channel a respective offset value is added to said delay.

Claim 24 (previously presented): An electrotherapy apparatus in accordance with claim 21, wherein the apparatus has a plurality of channels for applying electrical stimulations to

one or more active electrodes provided on the said person and in that for each said channel a respective offset value is added to said delay.

Claims 25-37 (withdrawn)

Claim 38 (new): An electrotherapy apparatus in accordance with claim 18 wherein the signal peaks are R-R peaks of an electrocardiogram of a person.